

# Model 130F Heavy-Duty Gauge Pressure Transmitters

## Description

Model 130F pressure transmitter is designed for heavy duty application where the water-hammer phenomenon is often encountered, demanding high resistance to overload pressure in pressure measurements. In the 130F series pressure transmitters the Wheatstone bridge circuit is made from BCM's high quality metal foil strain gauges. These strain gauges are bonded on the backside surface of the pressure diaphragm which is either welded on to or the part of the wetted parts of 130F, resulting in an integrated mechanical structure and eliminating the use of rubber O-ring insides the pressure port. Both the high overload pressure and integrated mechanical structure are the advantages of model 130F pressure transmitters.

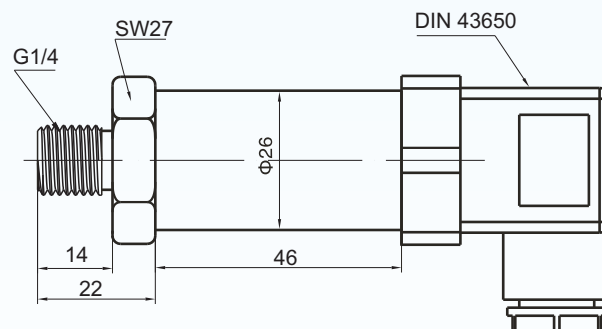
For these purposes both the pressure diaphragm and the wetted parts of 130F are made from 17-4PH stainless steel. The 130F series pressure transmitters are manufactured of many pressure ranges for gauge pressure measurements, With 1%fso (full scale output) measuring accuracy the output of 130F is configured to 4~20 mA current loop, or 0.5~4.5 Vdc, 0~5 Vdc, or 0~10 Vdc voltage signals to meet the most industrial requirements. In addition the temperature coefficients of both zero and span of 130F can be ignored for many industrial application thanks to BCM's advanced strain gauge technology.

## Features

- high resistance to overload pressure due to water-hammer
- integrated structure, no rubber O-ring inside pressure port
- many gauge pressure ranges: 0~6 bar, ..., 0~1000 bar
- able to be used for negative pressure measurement
- output signal: 4~20 mA, or 0.5~4.5 V, 0~5 V, or 0~10 V
- measuring accuracy: 1 %fso (standard), up to 0.5 %fso
- very low temperature drift for both zero and span
- materials of pressure membrane: 17-4ph stainless steel  
wetted parts: 17-4ph stainless steel  
housing: 304 SS (standard), or plastic
- environment protection: IP 65 (DIN 43650 or plug-in connector)  
IP 66, or IP67 (direct cable)
- medium temperature: up to 125 °C



## Dimensions



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## Specifications

pressure medium	gas or liquid	compatible with 17-4ph stainless steel
measuring ranges & type	bar (G)*	<b>0~6, 0~10, 0~16, 0~25, 0~40, 0~60</b> , 0~100, 0~160, 0~250, 0~400, 0~600, 0~1000
overload pressure	bar	21, 30, 48, 80, 140, 210, 310, 480, 750, 1100, 1500, 2100
burst pressure	bar	280, 400, 600, 800, 1000, 1300, 1600, 2000, 2600, 3300, 4200, 5500
output signal	mA, or Vdc	4~20 mA (2-wire), 0.5~4.5 V, 0~5 V, or 0~10 V
combined error (incl. NL, HY, RP)**	%fso	0.5, 1 (standard)
creep & zero return	%fso/5min	± 0.1
zero offset	%fso	± 1 maximum
span accuracy	%fso	± 0.5 maximum
long-term stability	%fso/year	± 0.15
supply voltage	V	12 to 36 V, but 5 V ± 0.5 V for 0.5~4.5 V output signal
insulation resistance	M	> 500 @ 100 Vdc
load resistance		250~1150 (for 4~20 mA current loop)
		> 5000 (for voltage output)
temperature coefficient of zero	%fso/10°C	± 0.05
temperature coefficient of span	%fso/10°C	± 0.05
medium temperature range	°C	-40 ~ +125
compensated temperature range	°C	-10 ~ +60
ambient temperature range	°C	-40 ~ +80
storage temperature range	°C	-40 ~ +85
process connection	external thread	G1/4, male (standard); other threads available upon request
electrical connection	connector/cable	DIN 43650 connector (standard), plug-in connector; shielded PVC cable

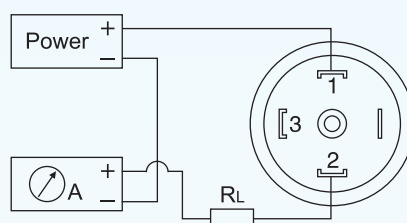
The listed specifications are subject to change without prior notice.

\* The pressure ranges indicated in bold can be used for negative pressure measurement, e.g., 0~6 bar for -1~6 bar.

\*\* NL = nonlinearity error, HY = pressure hysteresis error, and RP = repeatability error.

## Electrical connection

example of electrical connection for 4~20 mA current loop with DIN 43650 connector



## How to order

ordering code:

model - range&type - output - accuracy - process connection - electric connection - customized request (if any)

**example:** 130F - 0/600barG - 4/20mA - 1%fso - G1/4male - DIN 43650 - (with normal rubber O-ring)



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